AMENDMENTS TO THE CLAIMS

The following is a complete listing of the revised claims with a status identifier in parenthesis.

LISTING OF CLAIMS

1. (Previously Presented) A method for driving a group of pixels in a display device to display an image of a respective frame based on an interlace signal for displaying an image of a respective frame from video signals of a plurality of fields,

said method comprising:

generating driving signals based on video signals of a current field, so as to drive the group of pixels for displaying the frame image;

modulating the driving signals for driving the group of pixels, by referring to video signals of a previous field;

interpolating video signals for the previous field before modulating the driving signals, so as to generate video signals of one frame; and

interpolating video signals for the current field before modulating the driving signals, so as to generate video signals of one frame; and

adjusting strength of modulation in said modulating step based on a comparison between video signals of the current field and video signals of an earlier of previous two fields; wherein

in said modulating step, the driving signals being respectively modulated for the group of pixels by referring to video signals of the previous field used to generate the driving signals for the respective pixels.

2. (Previously Presented) The method as set forth in claim 1, wherein in at least one of interpolating video signals for the previous field and interpolating video signals for the current field, video signals are interpolated for a respective line of a field other than a target field of interpolation in such a manner that the interpolated video signals contain the same information as target field video signals of a frame line adjacent to the interpolated line.

3. (Previously Presented) The method as set forth in claim 1, wherein two fields make up one frame, and in at least one of interpolating video signals for the previous field and interpolating video signals for the current field, video signals are interpolated for a respective line of a field other than a target field of interpolation in such a manner that the interpolated video signals contain the same information as video signals obtained by averaging target field video signals respectively of a pair of frame lines adjacent to the interpolated line.

4. (Previously Presented) The method as set forth in claim 1, wherein two fields make up one frame, and in at least one of interpolating video signals for the previous field and interpolating video signals for the current field, video signals are interpolated for a respective line of a field other than a target field of interpolation in such a manner that the interpolated video signals contain the same information as target field video signals respectively of a pair of frame lines adjacent to the interpolated line, and that video signals for respective

pixels of the interpolated line are generated based on video signals for a plurality of pixels in one of the pair of frame lines and based on video signals for a plurality of pixels in the other line of the pair of frame lines.

5. (Previously Presented) The method as set forth in claim 1, wherein two fields make up one frame, and in at least one of interpolating video signals for the previous field and interpolating video signals for the current field, video signals are interpolated in a respective line of a field other than a target field of interpolation based on target field video signals respectively of a pair of frame lines adjacent to the interpolated line and based on video signals in adjacent fields of the target field.

6. (Previously Presented) The method as set forth in claim 1, wherein two fields make up one frame.

7. (Previously Presented) The method as set forth in claim 1, wherein said adjusting step, modulation is stopped in said modulating step when the video signals of the current field substantially match the video signals of the earlier of the previous two fields.

8. (Previously Presented) The method as set forth in claim 1, wherein in said adjusting step, strength of modulation is gradually reduced from a full strength to zero strength according to a difference between the video signals of

the current field and the video signals of the earlier of the previous two fields, if the difference falls within a predetermined range.

9. (Previously Presented) The method as set forth in claim 1, wherein in said modulating step, the driving signals for the group of pixels are modulated so as to facilitate a grayscale level transition from the previous field to the current field, and the grayscale level transition in said modulating step is facilitated such that, when a pixel undergoes a grayscale level transition from the previous field to the current field by repeating a cycle of grayscale level transition between a first grayscale level and a second grayscale level, an integrated value of luminance for the pixel takes an intermediate value between the first grayscale level and the second grayscale level by causing whichever faster of a response speed with the strongest level of facilitation for a first-to-second grayscale level transition and a response speed with the strongest level of facilitation for a second-to-first grayscale level transition to approach whichever slower of the two response speeds.

10. (Previously Presented) The method as set forth in claim 9, wherein the grayscale level transition in said modulating step is facilitated such that a grayscale level transition with the slowest response speed with the strongest facilitation determines response speeds of other grayscale level transitions, with the slowest response speed substantially matching the other response speeds.

11. (Previously Presented) A driving device for a display device, comprising:

current-and-previous field video signal generating means for generating video signals for a current field and video signals for a previous field based on an interlace signal for displaying an image of a respective frame from video signals of a plurality of fields; and

driving signal generating means for generating driving signals for driving the group of pixels to display the frame image, the driving signals being generated according to the video signals of the current field and being modulated according to the video signals of the previous field; wherein

said current-and-previous field video signal generating means includes

previous-field interpolating means for interpolating respective lines of the previous field so as to generate video signals of one frame for the previous field, and

current-field interpolating means for interpolating respective lines of the current field so as to generate video signals of one frame for the current field,

said driving signal generating means respectively generating the driving signals for the group of pixels, so that the driving signals of the respective pixels are modulated by referring to the video signals of the previous field used to generate the driving signals of the respective pixels, and

said driving signal generating means includes an adjusting means for adjusting strength of modulation based on a result of comparison between video signals of the current field and video signals of an earlier of previous two fields.

12. (Previously Presented) The driving device as set forth in claim 11, wherein

the interlace signal produces an image of one frame from images of two fields,

the current-field interpolating means includes a line memory for storing video signals of one line of the current field, and for outputting the video signals of one line twice by doubling a frequency of a dot clock for the interlace signal, and

the previous-field interpolating means includes,

a field memory for storing the video signals of respective lines of the current field and holding the stored video signals until a next field, and

control means, by referring to the output of the line memory, for causing the field memory to store the video signals of respective lines of the current field, and for causing the field memory to output the video signals of respective lines of the previous field twice at the frequency of the line memory.

13. (Previously Presented) The driving device as set forth in claim 11, wherein

the interlace signal produces an image of one frame from images of two fields,

the current-and-previous field video signal generating means includes a field memory for outputting the interlace signal with a delay of one field,

the current-field interpolating means includes a current-field line memory for storing video signals of one line of the current field, and for outputting the video signals of one line twice by doubling a frequency of a dot clock for the interlace signal, and

the previous-field interpolating means includes a previous-field line memory for storing video signals of one line outputted from the field memory, and for outputting the stored video signals of one line twice at the frequency of the current-field line memory.

14. (Previously Presented) The driving device as set forth in claim 11, further comprising:

corresponding-field video signal generating means for storing the video signals of the current field until input of a field having video signals on corresponding positions, and for outputting the stored video signals as corresponding-field video signals, wherein

the driving signal generating means compares the corresponding-field video signals with the video signals of the current field, and

the adjusting means for adjusts the strength of modulation by varying a strength of facilitation of a grayscale level transition from the

previous to current field based on a result of comparison, so as to generate the driving signals.

15. (Previously Presented) The driving device as set forth in claim 11, wherein

the interlace signal produces an image of one frame from images of two fields,

the current-field interpolating means includes a current-field line memory for storing video signals of one line of the current field, and for outputting the stored video signals of one line twice by doubling a frequency of a dot clock for the interlace signal, and

said driving device further comprises,

a field memory for storing the video signals of the current field until input of a later of next two fields,

control means for causing the field memory to output video signals of one line of the previous field alternately with video signals of one line of a previous-corresponding-field at the frequency of the current-field line memory, and

a field line memory for storing the video signals of one line of the previous-corresponding-field outputted from the field memory, and for outputting the stored video signals of one line of the previous-corresponding-field twice at the frequency of the current-field line memory, wherein

the previous-field interpolating means includes a previous-field line memory for storing the video signals of one line outputted from the field memory, and for outputting the stored video signals of one line twice at the frequency of the current-field line memory, and wherein

the driving signal generating means includes

comparing means for comparing the video signals of the current field outputted from the current-field interpolating means with the video signals of the previous-corresponding-field with respect to each pixel, and for outputting a result of comparison for each pixel, and

the adjusting means adjusts the strength of modulation for the driving signals of the respective pixels based on the result of the comparison.

16. (Previously Presented) The driving device as set forth in claim 11, wherein

the interlace signal produces an image of one frame from images of two fields, and

the current-field interpolating means includes a current-field line memory for storing video signals of one line of the current field, and for outputting the stored video data of one line twice by doubling a frequency a dot clock for the interlace signal, and

said driving device further comprises,

a field memory for storing the video signals of the current field until input of a later of next two fields,

control means for causing the field memory to output the video signals of one line of the previous field alternately with video signals of one line of a previous-corresponding-field at the frequency of the current-field line memory, wherein

the previous-field interpolating means includes a previous-field line memory for storing the video signals of one line outputted from the field memory, and for outputting the stored video signals of one line twice at the frequency of the current-field line memory, and wherein

the driving signal generating means includes

comparing means for comparing, with respect to each pixel, the video signals of the previous-corresponding-field with every other lines of the video signals outputted from the current-field interpolating means, and for outputting a result of comparison for each pixel, and a comparison-result line memory for storing the result of comparison for one line, and for outputting the stored result twice at the frequency of the current-field line memory; and

the adjusting means adjusts the strength of the modulation for the driving signals of the respective pixels based on the pixel-wise output of the comparison-result line memory.

17. (Previously Presented) A program for a computer for driving a group of pixels to display an image of a respective frame based on an interlace signal for displaying an image of a respective frame from video signals of a plurality of fields,

said program causing the computer to,

generate driving signals based on video signals of a current field, so as to drive the group of pixels for displaying the frame image;

modulate the driving signals for driving the group of pixels, by referring to video signals of a previous field;

interpolate video signals for the previous field before modulating the driving signals, so as to generate video signals of one frame;

interpolate video signals for the current field before modulating the driving signals, so as to generate video signals of one frame; and

adjust a strength of modulation in said modulating step based on a result of comparison between video signals of the current field and video signals of an earlier of previous two fields; wherein

in said modulating, the driving signals being respectively modulated for the group of pixels by referring to the video signals of the previous field used to generate the driving signals of the respective pixels.

18. (Previously Presented) A recording medium with a program for a computer for driving a group of pixels to display an image of a respective frame

based on an interlace signal for displaying an image of a respective frame from video signals of a plurality of fields,

said program causing the computer to

generate driving signals based on video signals of a current field, so as to drive the group of pixels for displaying the frame image;

modulate the driving signals for driving the group of pixels, by referring to video signals of a previous field;

interpolate video signals for the previous field before modulating the driving signals, so as to generate video signals of one frame; [[and]]

interpolate video signals for the current field before modulating the driving signals, so as to generate video signals of one frame; and

adjust a strength of modulation in said modulating based on a result of comparison between video signals of the current field and video signals of an earlier of previous two fields; wherein

in said modulating, the driving signals being respectively modulated for the group of pixels by referring to the video signals of the previous field used to generate the driving signals of the respective pixels.

19. (Currently Amended) The method of claim 1, wherein the modulation is an ~~overdrive~~ modulation facilitating a grayscale transition from a previous frame to a current frame.